THE HONORABLE RICHARD A. JONES

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
AT SEATTLE

GLASSWALL SOLUTIONS LIMITED, and GLASSWALL (IP) LIMITED, Plaintiffs, v. CLEARSWIFT LTD., Defendant.	No. 2:16-CV-01833-RAJ **PLAINTIFFS' RESPONSE TO DEFENDANT'S MOTION TO DISMISS UNDER RULE 12(b)(6)** NOTED FOR CONSIDERATION: APRIL 28, 2017 **ORAL ARGUMENT REQUESTED**

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Plaintiffs Glasswall Solutions Limited and Glasswall (IP) Limited ("Glasswall") herewith provide their response in opposition to Defendant Clearswift Ltd.'s ("Clearswift") Motion to Dismiss Plaintiffs' First Amended Complaint Under Rule 12(b)(6) [Doc. 8, April 4, 2017] (hereafter "Motion").

I. INTRODUCTION

In this action, Glasswall asserts U.S. Patent Nos. 8,869,283 ("'283 patent") and 9,516,045 ("'045 patent") to halt Clearswift's infringement of Glasswall's patent rights. The patents do not claim a mere abstract idea, but a specific and concrete method to improve computer function, i.e. a better way for computers to address the problem of computer viruses and malware, a problem existing only in electronic communications. Under the two-step analysis set forth in *Alice Corporation Pty. Ltd. v. CLS Bank International,* ___ U.S. __, 134 S. Ct. 2347 (2014), the Glasswall patents are plainly directed to subject matter that is eligible for patent protection under 35 U.S.C. §101.

Clearswift's Motion deliberately mischaracterizes the Glasswall patents, repeatedly asserting they are directed to an abstract concept of "filtering files or email and forwarding copies." This is untrue; the Glasswall patents are directed to a "new and useful process," 35 U.S.C. §101, in the form of an improved technique for eliminating the risk of computer virus contamination because of the unwitting transmission of harmful code and data in electronic communications.

As the patents' specification teaches, electronic communications between computers (such as e-mail delivery and webpage viewing) involve a risk unique to the computer environment: the unintended transfer of hidden, malicious software ("malware") intended to harm the recipient user's computer or processor. Because of this threat, it is now common (as it was at the time of application for the Glasswall patents) for computer users to install anti-virus software. Traditional anti-virus software scans incoming e-mail and other electronic files, checking the content of the incoming files against a virus definition library to look for

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a telltale string of characters associated with known harmful code. But the virus definitions must be constantly updated, taking up storage space as they grow, and even the most recent update may not recognize a newly-launched virus.

The Glasswall patents teach and claim a better solution: rather than scan incoming files to look for constantly changing virus code (and passing along the file any time no virus is found), the Glasswall technology creates a substitute, sanitized file using only those portions of the incoming file known to be safe, then passes the sanitized file to the user.

After the Supreme Court issued its opinion in *Alice*, the U.S. Patent and Trademark Office ("USPTO") provided patent examiners with guidelines for applying the *Alice* holding. These guidelines included examples of both impermissibly abstract and permissible, patent-eligible claims. The '283 and '045 patent claims are closely analogous to an example claim the USPTO has instructed its examiners to regard as patent-eligible under *Alice.* And both Glasswall patents asserted in this matter were issued after the *Alice* opinion was handed down, with no USPTO rejection under §101. As addressed in Section IV. A. below, while the USPTO's guidance to its examiners is not binding on this Court, it is persuasive of a proper analysis, under §101, of the Glasswall patents attacked in Clearswift's Motion.

II. LEGAL STANDARD APPLICABLE TO CLEARSWIFT'S MOTION

A. Motion to Dismiss pursuant to Rule 12(b)(6).

The Court evaluates a motion to dismiss to determine whether a complaint contains sufficient factual matter, accepted as true, to state a claim to relief that is plausible on its face. *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 557 (2007). For purposes of ruling on a Rule 12(b)(6) motion, the Court "accept[s] factual allegations in the complaint as true and construe[s] the pleadings in the light most favorable to the nonmoving party." *Manzarek v. St. Paul Fire & Marine Ins. Co.*, 519 F.3d 1025, 1031 (9th Cir. 2008).

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Clearswift, hoping to avoid denial of its Motion as premature, asserts that neither discovery nor claim construction is needed for the Court to resolve patent eligibility issues. Dkt. # 8 at pp. 6-7; citing *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Canada (U.S.)*, 687 F.3d 1266, 1273–74 (Fed. Cir. 2012). It is true the Federal Circuit commented that claim construction is not "an inviolable prerequisite" to resolution of patent claim eligibility, but that opinion actually holds: "[w]e note, however, that it will ordinarily be desirable—and often necessary—to resolve claim construction disputes prior to a §101 analysis, for the determination of patent eligibility requires a full understanding of the basic character of the claimed subject matter." *Id.* At this initial pleading stage, before the exchange of claim construction contentions under the Local Patent Rules, the Court has a very slim record on which to evaluate Clearswift's Motion.

Clearswift's Motion does not address its burden of proof. The *en banc* Federal Circuit opinion in the *Alice* case recognized that a patent issues only after the USPTO has assessed and endorsed its eligibility under §101. The Federal Circuit held that the presumption of validity applied to all challenges to patentability, including those under §101, and that any attack on an issued patent based on subject matter eligibility must be proven by clear and convincing evidence. *CLS Bank Int'l v. Alice Corp. Pty. Ltd.*, 717 F.3d 1269, 1304-05 (Fed. Cir. 2013), *aff'd*, __ U.S. ___, 134 S. Ct. 2347 (2014). The Supreme Court opinion affirming the result in the Federal Circuit was silent as to the burden to be met by one challenging a patent's validity.

Clearswift's Motion intentionally misrepresents the basic character of the Glasswall patents as directed to "filtering files," "screening email," "filtering emails and forwarding copies;" all in order to suggest a false analogy with *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307 (Fed. Cir. 2016). But Clearswift's characterization is at odds with the Glasswall patents' specification. As set forth in detail in Section III below, the Glasswall

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patents teach and claim a better way of eliminating unwanted code such as viruses and malware from computer communications.

Because a full understanding of the patents' character is critical to the Court's analysis, Glasswall has, concurrently with this Response, filed declarations that will augment the Court's understanding of the character of Glasswall patents; the content of the declarations is addressed below. Glasswall recognizes that, to the extent these declarations present matters outside the pleadings, Fed. R. Civ. P. Rule 12(d) may require the Court to address the Motion under the standards for summary judgment under Rule 56.

III. SUBJECT MATTER CLAIMED IN THE GLASSWALL PATENTS

A. Teachings of the '283 and '045 Specification.

An understanding of the Glasswall patent claims necessarily begins with analysis of the specification supporting those claims. Indeed, patent claims must always be understood in the context of the entire patent, including the specification. *Phillips v. AWH Corp*, 415 F.3d 1303, 1313 (Fed. Cir. 2005). Further, claims are interpreted as of the effective filing date of the patent application, and read as they would be by a person of ordinary skill in the relevant art. *Id.* Both the '283 and '045 patents are continuations of a common application claiming priority to June 9, 2005, and have essentially identical specifications, except for the priority information in the opening paragraph of each[1].

1. Unwanted code, viruses, and malware.

Consistent with the title of each patent, "Resisting the Spread of Unwanted Code and Data," the specification explains that unwanted code and data can include computer viruses (1:17-18) as well as spyware, malware, worms, and trapdoors (1:40-49); these may be attached to electronic communications in a separate attachment file, but also may be hidden

[1] Citations to the specification will be to the '283 patent, and by column and line number such that column 1, lines 40-49 will be represented as 1:40-49.

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within a file, e.g., an e-mail (1:29-32). Also, word processing, spreadsheet and database applications include macro scripting languages, which allow a file having the appearance of a document to include an executable script that can perform unauthorized operations on a user's computer (1:32-39). As a result, even as of 2005, an industry for supplying anti-virus software had developed (1:57-59).

2. Drawbacks to operation of typical anti-virus software.

In typical anti-virus programs, when the user wishes to access a file, the program scans the file to look for a particular string of code indicative of a known virus. The providers of anti-virus software monitor virus outbreaks, extract data identifying the virus, and then make that identification available for user download (1:60-2:12). But, as the specification teaches, this typical approach has inherent drawbacks.

First, because computer viruses can easily be "mutated" through minor changes in code, the virus definition files (collections of data used to identify viruses) constantly grow ever larger. These files take up space on the user's computer, and larger files mean a corresponding increase in the time required to check incoming files for the presence of known viruses (2:13-26), delaying the user's access to the incoming file. Importantly, because this approach looks for the presence of a virus and passes everything unless it is recognized as a virus, it always fails to protect some number of computers, because new viruses must come to the attention of the anti-virus company before they can be identified and added to the virus definition update (3:17-23). And the user lacks the best available protection unless he or she promptly downloads each virus definition update.

3. A different method for malware protection.

The Glasswall patents teach and claim a wholly different method of malware protection, one that avoids these drawbacks. The specification teaches that achieving interoperability among different proprietary programs requires that most data file formats conform to known, rigid standards. Thus, the vast majority of files are comprised of data

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meeting narrow pragmatic constraints (2:50-3:5). These "real world" constraints facilitate the detection of "normal" acceptable files (3:6-11). Accordingly, the specification teaches that malware protection can be achieved by detecting normality (i.e., passing only content that conforms with known file standards and typical user behavior) rather than attempting to detect abnormality (viruses and other malware), making it unnecessary to use virus definition files at all, and thus avoiding the need for frequent updates and other disadvantages of those files (4:29-33). The specification notes that standards for normal, acceptable files are relatively static, that is, they change much less frequently than the "frantic speed with which anti-virus updates must be distributed" (4:33-36).

4. Specific embodiments.

a. First embodiment

The specification provides detailed teachings of different embodiments for implementing this innovative approach. A first embodiment teaches an "AV (anti-virus) application" operating on an incoming electronic file. The data content of the file is analyzed to separate content meeting allowable formats for normal, acceptable files from content that does not conform (with no analysis of the non-conforming content to determine whether it is actually harmful). The allowable content is then regenerated into a new electronic file, which can be safely passed through to the operating system (5:2-11). To analyze for normal (or "conforming") content, AV application stores rules for each file type specification. These include allowable content values, format rules, and any other constraints that describe normal, allowable content for that file type (5:64-6:4 and 6:17-29). The specification suggests examples of non-allowable data components, such as complex macros in word processing files, I-frames in HTML pages, and infrequently-used control characters in ASCII files (6:30-39).

Next, the specification teaches the operation of a generalized conformity analyzing device. This determines if the electronic file is in the proper format, and analyzes content

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against the rules for that file type. Conforming content data are extracted and regenerated into a substitute file (6:40-51). Thus, "due to the conformity check and regeneration of the file, viruses are unable to enter and infect the operating system; in fact, nothing but content data in a commonly occurring format is extracted and consequently regenerated." (6:59-63).

The specification describes, in this embodiment, handling of an electronic message comprised of sub-parts, some of which conform and some do not. The AV application imposes a test to determine whether the majority or most important parts do conform. If so, the AV application regenerates only the conforming sub-parts, while inserting warning text to alert the recipient that some of the file was not allowed through (6:64-7-10).

b. Second embodiment

The specification provides detailed teachings in columns 7 through 13 of a second embodiment primarily directed to e-mail transmission. In addition to the concepts described in the first embodiment, this embodiment includes a description of an exemplary e-mail conformity analyzer, to check for conformity with structures and formats specified by the RFC 822 standard (9:4-10:33). The specification also explains that e-mail files frequently constitute multiple types of data, and describes a number of specific conformity analysis devices corresponding to different file types that may be components of an e-mail file. The specification describes conformity analysis of ASCII text (11:45-12:47), TIFF files (12:48-13:19), RTF, word processing, JPEG (13:19-30) and other potential data components that may be combined in e-mail files.

The specification describes handling of a complex e-mail file having multiple types of components:

> [I]f an e-mail comprises a nesting of different types of data, conformity analyzing devices are recursively called, so that several specific devices are run in sequence and each being put on hold at each point that a further type of data is discovered. In this manner, an e-mail with a zip file, that includes a word processing document, which includes a JPEG picture file could run through the sequence of different conformity analyzing devices (zip, word

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> processing, JPEG) in order to drop down through the nesting of files and analyze each file in sequence." (10:53-62; Fig. 3)

Thus, each of the multiple types of components in this nested e-mail is analyzed for conformity with standards of acceptable values for that particular file. Once all components of the file have been analyzed for conformity by this recursive analysis, and all conforming components have been regenerated, the file is reassembled using the conforming regenerated parts. (10:62-63).

Once the file has been reassembled, the specification teaches a further determination whether enough parts of the e-mail have been regenerated to form a suitably coherent and understandable e-mail. (10:64-11:6; Fig. 3 Steps S311-S315). If so, the regenerated data are reassembled by the RFC 822 (e-mail protocol) analysis device, to ensure that the regenerated e-mail sent to the recipient is in the correct format for e-mail message. *Id.* If, on the other hand, the regenerated components of the e-mail cannot form a useful e-mail, the file is rejected and warning text is forwarded to the intended recipient (11:7-15; Fig. 3 Step S317).

c. Isolation

The specification describes that it may be desirable to implement a bit-reversed scrambling method "so that incoming executable files are not allowed to automatically run as they enter the AV application," and thereby infect the destination operating system. (5:22-35). Other scrambling methods are taught at 16:8-22.

d. Pre-approval or authorization

The specification also teaches instances in which it is desirable for the AV application to allow nonconforming content from a known sender, for example a "trusted partner of [a] banking system" who regularly sends spreadsheets that incorporated complex macros. (14:14-27, 41-44). This pre-approval rubric is incorporated into the limitations of each independent claim of the '283 patent.

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The '045 patent claims do not reference pre-approval, instead they recite determining whether non-conforming data is authorized, e.g., 17:12-19 in the '045 patent.

B. Character of the Glasswall Patent Claims

Federal Circuit precedent provides that a Court should examine a patent claim in its entirety in order to understand what the claim's "character as a whole" is "directed to." *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) ("[W]e have described the first-stage inquiry as looking at the 'focus' of the claims, their 'character as a whole . . . .'").

In determining the purpose of patent claims, the Court should not reach for an unduly "high level of abstraction . . . untethered from the language of the claims," *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016). Because all inventions, at some level, apply laws of nature, natural phenomena or abstract ideas, the Court must "ensure at step one that we articulate what the claims are directed to with enough specificity to ensure the step one inquiry is meaningful." *Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1347 (Fed. Cir. 2017), (citing *Alice*, 134 S. Ct. at 2354: "[W]e tread carefully in construing this exclusionary principle lest it swallow all of patent law.").

1. Subject matter of the Glasswall patents

Only after the disclosures and teachings of the '283 and '045 specification are understood can the Court turn to the task of determining the essential character of the subject matter claimed.

When the Glasswall claims are properly evaluated in light of the teachings of the specification, it is apparent that a person of skill in the art would understand that independent Claim 1 of the '283 patent is directed to a process for eliminating unwanted code, through (i) analyzing an electronic file for normal (conforming) content, (ii) extracting

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only the conforming content, (iii) regenerating that into a sanitized file, and (iv) applying the pre-approval rubric to the non-conforming code.

In the ’283 patent, dependent Claims 2-6 impose further specific limitations on the determination of known, acceptable file content. Claim 7 imposes the scrambled format file isolation limitation, while Claim 8 provides that the scrambling the in “bit reversed order.” Independent Claims 15-17 and 19-23 impose other specific limitations.

Independent Claim 1 of the ’045 patent is similarly directed to eliminating unwanted code without scanning to determine if it is actually harmful, through (i) analyzing an electronic file for normal (conforming) content, (ii) determining whether the nonconforming data are authorized, and (iii) regenerating a sanitized file that includes the nonconforming data if so.

2. Clearswift’s Motion misrepresents the Glasswall patents

Clearswift's Motion omits any meaningful analysis of the specification, as it must, because the Motion is premised upon Clearswift's misrepresentation of the character of the Glasswall patents. The Motion addresses Claim 1 of the ’283 patent and Claim 1 of the ’045, but includes almost no analysis of their dependent claims, or other independent claims. Clearswift has not designated a representative claim, or shown why any one claim in either patent should be considered representative of others.

Clearswift repeatedly urges that the Glasswall patents are directed to “filtering electronic files or e-mail,” “e-mail filtering claims,” or “filtering emails and forwarding copies.” Clearswift baldly asserts “[t]he Glasswall claims are effectively directed to *any* way of filtering e-mails and forwarding a copy, and do not disclose a technical improvement in how a computer does so.” Dkt. # 8 at p. 20 (emphasis in original).

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Clearswift's Motion utterly ignores the specification's explanation of the disadvantages inherent in typical anti-virus programs found in the prior art, which operate by checking incoming files against the constantly growing yet always out of date virus definition file, and forwarding any file not found to contain a string of harmful code. Clearswift's Motion likewise ignores the specification's disclosure of an improved method that avoids these disadvantages. The Motion asserts the claims are directed to "forwarding a copy" of files (e.g., Motion at 20) whereas the fundamental teaching would be understood to the skilled artisan as regenerating a substitute file from known safe content, not copying in any sense. The Motion also completely disregards the pre-approval limitation (e.g. at 16:57-61 of the '283 patent) that forms a specific requirement of all claims.

Federal Circuit precedent requires that a Court "'must be careful to avoid oversimplifying the claims' by looking at them generally and failing to account for the specific requirements of the claims." *McRO, Inc. v. Bandai Namco Games Am. Inc.,* 837 F.3d 1299, 1313 (Fed. Cir. 2016). Clearswift's Motion goes beyond mere oversimplification to outright misrepresentation of the Glasswall claims. Clearswift's repeated suggestions that the claims are directed to nothing more "email filtering" or "forwarding a copy" are in conflict with the specification and with the clear language and meaning of the claims themselves.

IV. THE ASSERTED GLASSWALL PATENTS ARE CLEARLY DIRECTED TO PATENT-ELIGIBLE SUBJECT MATTER UNDER 35 U.S.C. §101

A. The Patents Do Not Claim Abstract Ideas.

1. *Alice* framework

Section 101 of U.S.C. Title 35 "defines the subject matter that may be patented under the Patent Act." *Bilski v. Kappos*, 561 U.S. 593, 601 (2010). Under §101, the scope of patentable subject matter encompasses "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." *Id.*

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In *Alice*, the Supreme Court set forth a "framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts" originally addressed in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 77 (2012). This *Alice* framework proceeds in two steps as the opinion describes:

> First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts. If so, we then ask, '[w]hat else is there in the claims before us?' To answer that question, we consider the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application. We have described step two of this analysis as a search for an 'inventive concept' —i.e., an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'

Alice, 134 S. Ct. at 2355.

Under step one of this framework a Court assesses "whether the claims at issue are directed to a patent-ineligible concept."

In this matter, Clearswift alleges the Glasswall patents are directed to an abstract idea (rather than a law of nature or a natural phenomenon). But proper analysis shows that Glasswall does not claim an abstract idea. First, the USPTO agrees that the Glasswall patents are not abstract. As discussed below, neither the '283 nor '045 patent was rejected as abstract despite the fact that both issued after *Alice*. Moreover, under the post-*Alice* §101 guidelines issued by the USPTO, Examiners are instructed that an example patent claim, closely analogous to Glasswall's, is not directed to an abstract idea. Second, the Glasswall claims are not directed to an abstract idea under the various tests and techniques that other courts have employed to assess claims under §101 in the wake of *Alice*: "brick and mortar analogy," "mental process," and "improvements to computer function," that are "rooted in computer technology." Third, the Glasswall product technology embodying its patented innovations has received industry recognition in the form of "best new innovation" awards,

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and Glasswall products are in use by, among others, government agencies in the U.S. and other countries, as a vital part of their communication security protocols. The Glasswall patents cover a successful, lauded, concrete innovation, rather than a mere abstract idea.

2. USPTO practices show that these claims are not directed to abstract ideas.

a. USPTO Example 1

Following the decision in *Alice*, the USPTO issued guidelines to Patent Examiners regarding subject matter eligibility under 35 U.S.C. § 101. The USPTO has provided examples of claims directed to statutory subject matter as well as those that encompass merely abstract ideas. These guidelines and examples are intended to provide Patent Examiners with concrete guidance in applying the §101 jurisprudence after *Alice*. Both the guidelines and examples are available on the USPTO website at https://www.uspto.gov/patent/laws-and-regulations/examination-policy/subject-matter-eligibility.

Example 1[2] in the "Abstract Idea Examples" section posits a hypothetical Claim 1 that is "not directed to an abstract idea, ..." *see* Example 1 at 1. The Example states that the "invention relates to isolating and removing malicious code from electronic messages" to prevent infection by computer virus. The Example Background provides that an incoming communication, e.g. email, is received and placed in a quarantine section of computer memory. The data within the communication "is compared to malicious code-indicative patterns stored within a signature database;" (this sort of operation is akin to a typical anti-virus program as described above.) An extraction routine parses the file and flags all bytes between a beginning and ending code marker, then creates a sanitized data file by

[2] Example 1 is Exhibit 1 to the Declaration of Ariel Rogson, filed contemporaneously with this Response.

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sequentially copying non-flagged data bytes into a new file. The sanitized file is then transferred to non-quarantined memory. *See* Example 1 at 1.

USPTO Example 1 next includes two sample claims implementing this invention, and provides an analysis explaining why the claims are deemed eligible. The analysis explains:

> The claimed invention relates to software technology for isolation and extraction of malicious code contained in an electronic communication. The claim is directed towards physically isolating a received communication on a memory sector and **extracting malicious code** from that communication to **create a sanitized communication** in a new data file. Such action **does not describe an abstract concept**, or a concept similar to those found by the courts to be abstract, such as a fundamental economic practice, a method of organizing human activity, an idea itself (standing alone), or a mathematical relationship. In contrast, the invention claimed here is directed towards performing isolation and eradication of computer viruses, worms, and other malicious code, a **concept inextricably tied to computer technology and distinct from the types of concepts found by the courts to be abstract.** Accordingly, the claimed steps do not recite an abstract idea.

See Example 1 at 3 (emphasis supplied).

The fundamental character of the hypothetical claim recited in Example 1 is closely analogous to the fundamental character of independent Claims 1 and 15 of the ’283 patent, as well as the systems and apparatus of independent Claims 16, 17, and 19-23. As explained above, these ’283 claims are directed to eliminating malicious code ("malware") in received electronic communications and regenerating a new, sanitized communication file (while additionally incorporating limitations to implement the pre-approval concept). While the ’283 invention eliminates malware in a fundamentally different manner than the USPTO Example (by extracting known safe code rather than trying to identify malicious code), the USPTO's reasoning clearly suggests that the ’283 Claims, analogous to the hypothetical claim in Example 1, do not recite an abstract idea.

The same is true of the ’045 patent. The fundamental character of Claim 1 is its focus on eliminating malware risk through identifying nonconforming data, and regenerating it

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into a substitute file only if the non-conforming data is determined to be authorized. Again, under the reasoning expressed by the USPTO and taught to its Examiners, the subject matter claimed in the '045 is not directed to an abstract idea.

Glasswall recognizes that these administrative processes of the USPTO are not precedential authority for this Court. Nevertheless, it is worth noting that other U.S. District Courts have found this identical USPTO guidance and Example persuasive, and have relied on the associated reasoning to find the absence of an abstract idea. *See, e.g., Finjan, Inc. v. Blue Coat Sys., Inc.*, No. 13-CV-03999-BLF, 2015 WL 7351450, at *8 (N.D. Cal. Nov. 20, 2015) ("The Court finds the claim at issue to be similar to the hypothetical claim in the Patent Office's guidance . . . . Although Defendant argues and the Court recognizes that the Patent Office's guidance is not binding, the Court finds its reasoning persuasive.").

b. The USPTO did not reject either the '283 or '045 patents for abstract idea.

The '045 patent is attached as Exhibit C to the Amended Complaint, Dkt. # 5-3; it is a continuation application that was filed October 2, 2014, four months after the *Alice* decision. During examination of that application, the Examiner issued Office Actions in November 2015, February 2016, and July 2016. Declaration of Ariel Rogson, ¶8. All of these administrative processes occurred not only after *Alice*, but after the USPTO issued its post-*Alice* examination guidelines. *Id.* At no time during examination of the '045 application did Examiner Jackson rejected any of the claims under §101. *Id.*

The '283 patent, attached as Exhibit A to the Amended Complaint, Dkt. # 5-1, issued October 21, 2014, over four months after the *Alice* decision. The Examiner did not reject any of the claims in the '283 as being directed to an abstract idea. *Id.* ¶¶9-10.

3. Reviewing how other authorities analyze abstraction shows that these claims are not abstract

a. No "brick and mortar" analogy

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One technique for determining abstraction that has been identified in §101 jurisprudence following the *Alice* decision is to determine whether the patent can easily be analogized to a "brick and mortar" process, implementing "fundamental . . . practice[s] long prevalent in our system," *Alice*, 134 S. Ct. at 2356.

Clearswift relies heavily upon *Symantec*, in which the Federal Circuit upheld the District Court's finding of an abstract idea. As set forth in Part III. B. above, Clearswift's reliance is based on Clearswift's misrepresentation of the fundamental character of the Glasswall patents: "filtering emails and forwarding a copy." Dkt. # 8 at p. 20.

In *Symantec,* the Court concluded that the fundamental character of Intellectual Ventures' claims reciting "receiving, screening, and distributing e-mail" were merely an abstract idea, because they could easily be analogized to processes occurring in a "brick and mortar" post office or corporate mailroom:

> [I]t was long-prevalent practice for people receiving paper mail to look at an envelope and discard certain letters, without opening them, from sources from which they did not wish to receive mail based on characteristics of the mail. The list of relevant characteristics could be kept in a person's head. Characterizing e-mail based on a known list of identifiers is no less abstract.

Symantec, 838 F.3d at 1314. Regarding another patent at issue in the same case, the Federal Circuit noted:

> And IV [Intellectual Ventures] itself informed the district court, in its technology tutorial, "[i]n the typical environment, the post office resides on a mail server, where the company's emails are received, processed, and routed to recipients. Conceptually, *this post office is not much different than a United States Postal Service office that processes letters and packages*, except that the process is all computer-implemented and done electronically in a matter of seconds." This demonstrates that the concept is well-known and abstract.

Id. at 1318 (emphasis supplied).

But despite Clearswift's false representation that the Glasswall claims are directed only to "filtering emails and forwarding a copy," Clearswift does not contend that the

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Glasswall patents have any brick-and-mortar analogy. Indeed, it is impossible to call to mind a long prevalent, fundamental practice that can be analogized to the technology of the Glasswall patents. While malware hidden in an electronic message is commonplace, paper mail containing harmful content is unheard of. Unlike computer viruses, written content in a letter cannot disable the reader's mind, or migrate elsewhere in the reader's home and affect its operation.

An extreme example of harmful content that could be attached to a paper letter might be the 2001 mailing of anthrax-laden letters to Congressional representatives. But no attack of that sort has been dealt with for over a decade. And that event does not provide a brick and mortar analogy of a widely prevalent, fundamental practice. No one other than trained investigators, certainly not the average person, has ever had any real-world experience in detecting a harmful pathogen in a paper envelope, delivered with the ordinary mail. Nor has there ever been any prevalent, fundamental practice for removing such a pathogen, reconstructing the content of the associated letter into a new letter, and forwarding it on to the recipient, much less any form of "pre-approval" of such a mailing.

The claims of the '283 and '045 patents address a problem that simply does not exist in the real world, outside the computer environment. The absence of any conceivable brick-and-mortar analogy suggests that the Glasswall patents are not directed to an abstract idea. The patents are directed to a specific computer improvement rather than an implementation, by standard computer usage, of a long-prevalent real world practice. *See also*, *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1258 (Fed. Cir. 2014) (No abstract idea found; majority rejecting analogy to "store within a store" concept of a warehouse store with a kiosk for selling a third-party partner's cruise vacation package: "While that concept may have been well-known by the relevant timeframe, that practice did not have to account for the ephemeral nature of an Internet 'location' or the near-instantaneous transport between

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these locations made possible by standard Internet communication protocols, which introduces a problem that does not arise in the 'brick and mortar' context.").

b. Not drawn to a "mental process"

Some authorities deciding §101 issues question whether a claimed method is "drawn to a mental process-a subcategory of unpatentable abstract ideas, ..." *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1146 (Fed. Cir. 2016), quoting *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1371 (Fed. Cir. 2011).

The example given in *CyberSource* is illustrative. The Federal Circuit assessed a claim for "verifying the validity of a credit card transaction over the Internet" which involved (1) "obtaining information" about other transactions that were conducted with the same Internet address, (2) "constructing a map" of those credit card numbers, and (3) "utilizing the map of credit card numbers to determine if the credit card transaction is valid." 654 F.3d at 1370. The Federal Circuit deemed the claim unpatentable because the entire method "can be performed in the human mind, or *by a human using a pen and paper*." *Id*. at 1372 (emphasis supplied).

Specifically, the Court held, the step of "obtaining information . . ." could "be performed by a human who simply reads records of Internet credit card transactions from a preexisting database." *Id*. The step of "constructing a map . . ." could be performed "by writing down a list of credit card transactions made from a particular IP address." *Id*. The step of "using the map . . ." was so broad that it "necessarily include[d] even logical reasoning that can be performed entirely in the human mind." *Id*. at 1373. Thus, the court concluded, the claim was entirely directed to a mental process. *Id*.

But the Clearswift Motion does not suggest that the mental step analysis applies to the Glasswall patents, and it clearly does not. As addressed above, fundamental to the claims of the Glasswall patents is the concept of storing sets of rules, values, and parameters of normal, acceptable file formats for the wide variety of file types commonly exchanged in

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computer communications. The claims require receiving incoming electronic files, identifying the correct file type(s), analyzing the file content to identify conforming content then regenerating conforming content into a new file, and applying the "pre-approval" or "authorized" analyses.

That these steps cannot be performed in a human mind or with pencil and paper is clearly illustrated by considering how to process a contaminated JPEG image file that has, for example, harmful code embedded in its header or concealed within its data. Analysis of such a file is vastly too complex to be processed with pen and paper. It is impossible to conceive how a human mind, or pen and paper, might deconstruct an image file at all, much less analyze it for conformity to expected rules, then reassemble the data into a regenerated image that omits the nonconforming, contaminated data.

c. Clear improvement to computer function

A third grouping of post-*Alice* decisions considers whether the patent claims at issue are directed to an improvement in the functioning of a computer (and therefore not abstract), in contrast to "simply adding conventional computer components to well-known business practices," *Enfish,* 822 F.3d at 1338 (Fed. Cir. 2016) (collecting prior cases rejecting as abstract a number of patents using conventional computer activities in contract formation, financial budgeting, price optimization and others). In *Enfish*, the Federal Circuit found that patent claims directed to a specific type of self-referential table in a computer database were not abstract because they focused "on the specific asserted improvement in computer capabilities." *Id.* at 1335-36.

The *Enfish* opinion emphasized that the patent's specification taught that "the self-referential table functions differently than conventional database structures," *id.* at 1337, and explained that the claimed invention achieved benefits over conventional database structures "such as increased flexibility, faster search times, and smaller memory requirements." *Id.*

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In exactly the same way, the specification common to the Glasswall '283 and '045 patents teaches how the approach of looking for known file content "operates in a fundamentally different manner to known anti-virus programs [which] aim to detect viruses," (3:15-18). And just as in *Enfish*, the Glasswall specification teaches the advantages of this different approach in terms of improved speed and reduced system burden, because it eliminates the need to store bloated virus definition files and scan incoming content to look for the known viruses defined in them (3:15-23; 4:29-39). Additional advantages include eliminating the need for users to continually download new virus definitions, and zero-day protection, protecting even against brand-new viruses that have not been added to any definition file[3]. The *Enfish* reasoning shows that the Glasswall patents are plainly directed to an improvement in computer function, not simply to automating a common business process using computers. The Glasswall patent claims focus on a specific method for improving the relevant malware elimination technology; they are not directed to "a result or effect that itself is the abstract idea and merely invoke[s] generic processes and machinery." *McRO,* 837 F.3d at 1314.

Because the Glasswall patent claims are directed to a specific, concrete improved method for eliminating malware, they are "necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks," and are therefore directed to patent-eligible subject matter. *DDR Holdings*, 773 F.3d at 1257.

Clearswift's Motion, Dkt. # 8 at pp. 18-20, argues that Glasswall's patents are not directed to improved computer functionality, but all of its arguments are based upon a strawman: Clearswift posits that the patents are directed to an abstraction based upon Clearswift's extreme misrepresentation of the character of the patent claims. Remarkably, Clearswift states "[t]he Glasswall claims are effectively directed to *any* way of filtering e-

[3] As the patents are incorporated into the Amended Complaint, all these statements of fact from the patent specification must be regarded as true, and construed in the light most favorable to Glasswall.

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mails and forwarding a copy, and do not disclose a technical improvement in how a computer does so." *Id.* at p. 20 (emphasis in original). This is nonsense, of course, and completely at odds with the scope of the claims in light of the specification. As discussed extensively in Section III above, the claims are directed to a specific novel technique for eliminating the threat posed by computer malware, and the patents clearly disclose a technical solution (regenerating electronic files using only known safe content) to the technical problems inherent in traditional anti-virus software, with its need for constantly updated virus definition files.

And all of Clearswift's arguments are based on this blatant mischaracterization. It is irrelevant whether a patent having the characteristics Clearswift posits would be held ineligible under *Enfish*, it is relevant only that the Glasswall patents are eligible for the reasons addressed here.

B. The Patents Describe and Claim an Inventive Concept.

For the reasons set forth in the prior Section A, it is clear that the Glasswall patent claims are not directed to an abstract idea under the first step of the *Alice* framework. For that reason, it is not necessary for the Court to proceed on to the second step.

But even if the Court were to reach the opposite conclusion as to step one, the patents clearly set forth an inventive concept that would render even an abstract idea eligible for patent protection under *Alice* framework step two.

The *Alice* opinion emphasizes that "an invention is not rendered ineligible for patent simply because it involves an abstract concept. '[A]pplication[s]' of such concepts 'to a new and useful end,' we have said, remain eligible for patent protection." *Id.* at 2354 (internal citations omitted).

An illustration of concepts that have been found to meet the "something more" analysis of step two of the *Alice* framework is found in *DDR Holdings*. The patent at issue in that case dealt with an e-commerce website, essentially an online store, which generated

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additional revenue by selling advertising space, which could include banner ads with links to items offered for sale by third-party merchants. The disadvantage to the online store owner was that a user, clicking on such third-party ad would leave the host's webpage, such that the host lost control of potential customers. The patent claimed a novel solution in the method of serving the website visitor a hybrid webpage merging the host's content with that of the third-party merchant, allowing the host to retain control of the website visitor.

> The Court held that the relevant patent claims recited an inventive concept: a specific way to automate the creation of a composite web page by an "outsource provider" that incorporates elements from multiple sources in order to solve a problem faced by websites on the Internet. As a result, the '399 patent's claims include "additional features" that ensure the claims are "more than a drafting effort designed to monopolize the [abstract idea]." *Alice,* 134 S. Ct. at 2357. In short, the claimed solution amounts to an inventive concept for resolving this particular Internet-centric problem, rendering the claims patent-eligible.

DDR Holdings, 773 F.3d at 1259.

The Glasswall patent claims are not directed to "filtering e-mails and forwarding a copy," Dkt. # 8 at p. 20; neither are they directed to "blocking e-mails that may have a virus" or any similar broadly abstract concept. Instead, the claims of Glasswall's '283 and '045 patents recite a specific technique for resolving disadvantages in prior art anti-virus software. The Glasswall claims are specific to the disclosed method, provide for analysis of incoming files for conforming content and creating a regenerated file that may be safely passed on to the user. Each of the claims also incorporates the pre-approval rubric to allow for receipt of nonconforming content from trusted senders. All of these additional limitations to the claimed invention amount to significantly more than a mere abstract idea. Thus, even if the claims were determined to be directed to abstract subject matter in step one of the *Alice* framework, they would still be patent-eligible under step two.

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C. Industry Awards and Customer Success Show the Concrete Nature of This Innovation.

Clearswift's Motion was filed at the very outset of this case, prior to claim construction and discovery, prior even to Clearswift's Answer. Glasswall submits that once the claims of the '283 and '045 patents are evaluated in light of the specification, the basic character of the claims shows that Glasswall's patents are clearly directed to patent-eligible subject matter, rather than a mere abstract idea.

However, it should be noted that many of the District Court decisions on §101 matters cited in this Response (as well as in Clearswift's Motion) were rendered after extensive discovery and motion practice, and in many cases in a post-trial context, after the respective Courts had a full opportunity to become acquainted with the relevant technologies and the subject matter of the respective patents.

But because Clearswift's Motion was filed in a vacuum, so to speak, and this Court has not had the benefit of any tutorial or expert testimony about the nature of the technology, Glasswall wishes to make the Court aware that the computer security industry certainly does not regard the technology protected by Glasswall's patents as a mere abstract idea, unrelated to concrete real world applications.

Rather, Glasswall products that incorporate the innovations claimed in the '283 and '045 patents have received important industry recognition. For example, just in this past year, Glasswall Solutions was named "Best Email Security Solution" for 2016 by SC Magazine - SC Awards Europe. In addition, the Institution of Engineering and Technology (IET), a multidisciplinary engineering organization headquartered in the UK, presented Glasswall its 2016 award for "Cyber Security Innovation of the Year." Declaration of Raymond Leopold, Ph.D., ¶21.

Additionally, agencies in the U.S., Canada and Australia have recognized the value Glasswall technology provides to secure email communications. Agencies have procured

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Glasswall products to provide secure communications with defense and security contractors, or specified that their contractors or providers use Glasswall products to secure their email servers. *Id.* ¶¶22-23.

This government and industry recognition underscores the concrete nature of the innovations and products protected by Glasswall's patents. This innovation is patent-eligible, and capable of protection under 35 U.S.C. §101.

V. CONCLUSION

The Glasswall patents, presumed valid, were issued by the USPTO following the Alice decision, and without any claim rejection on the basis of abstract idea. The Glasswall claims are directed to a specific and concrete improvement in eliminating the risk of computer contamination through unwanted code. The specification discloses, and the claims are directed to, an improved technique that solves a technical problem through technical means. The Glasswall patents are plainly directed to patent-eligible subject matter. Clearswift's Motion should be denied.

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CERTIFICATE OF SERVICE

I hereby certify that on the 24th day of April, 2017 I caused the foregoing document to be electronically filed with the Clerk of the Court using the CM/ECF system which will send notification of such filing to all counsel of record for the Parties in the above-captioned litigation:

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